Hovsepian v. Apple, Inc.
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EXHIBIT C

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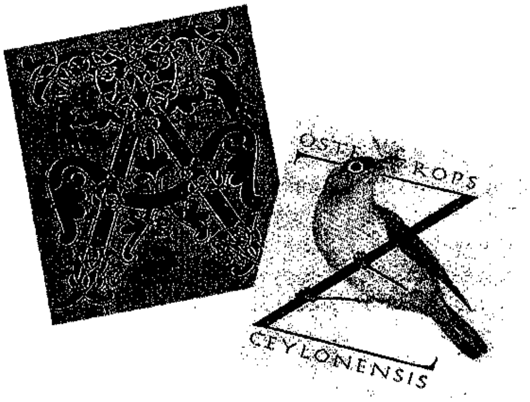
The American Heritage® Dictionary *of the English Language*

FOURTH EDITION


CEYLONENSIS

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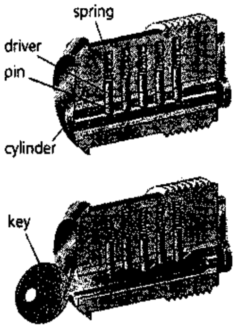
Manufactured in the United States of America

lobster
Northern lobster
Homarus americanus

lobster pot



lock¹
top: pin-tumbler cylinder lock
bottom: ships in the Miraflores Locks, Panama Canal

loath•ing (lō′*th*ĭng) *n.* Great dislike; abhorrence. —**loath′ing•ly** *adv.*

loath•ly (lōth′lē, lōth′-) *adj.* Loathsome. [Middle English *lothly*, from Old English *lāthlīc* : *lāth*, hateful + *-līc*, like; see -LY¹.]

loath•some (lōth′səm, lōth′-) *adj.* Arousing loathing; abhorrent. See synonyms at **offensive.** [Middle English *lothsome* : *loth*, hateful; see LOATH + *-som*, adj. suff.; see -SOME¹.] —**loath′some•ly** *adv.* —**loath′some•ness** *n.*

loaves (lōvz) *n.* Plural of **loaf¹**.

lob (lŏb) *v.* **lobbed, lob•bing, lobs** —*tr.* To hit, throw, or propel in a high arc: *lob a beach ball; lob a tennis shot over an opponent's head.* —*intr.* **1.** To hit a ball in a high arc. **2.** To move heavily or clumsily. ❖ *n.* **1.** A ball hit, thrown, or propelled in a high arc. **2.** *Slang* A clumsy dull person; a lout. [From Middle English, pollack, lout, probably of Low German origin.] —**lob′ber** *n.*

Lo•ba•chev•ski (lō′bə-chĕf′skē, lə-bə-chyĕf′-), **Nikolai Ivanovich** 1792–1856. Russian mathematician who developed (1826) a system of non-Euclidean geometry.

lo•bar (lō′bər, -bär′) *adj.* Of or relating to a lobe or lobes, as of the lungs: *lobar pneumonia.*

lo•bate (lō′bāt′) also **lo•bat•ed** (-bā′tĭd) *adj.* **1.** Having lobes; lobed. **2.** Shaped like a lobe. **3.** Having separate toes, each bordered by a weblike lobe. Used of the feet of certain birds. —**lo′bate′ly** *adv.*

lo•ba•tion (lō-bā′shən) *n.* **1.** The state of being lobed. **2.** A structure or part resembling a lobe. **3.** A lobe.

lob•by (lŏb′ē) *n., pl.* **-bies 1.** A hall, foyer, or waiting room at or near the entrance to a building, such as a hotel or theater. **2.** A public room next to the assembly chamber of a legislative body. **3.** A group of persons engaged in trying to influence legislators or other public officials in favor of a specific cause: *the banking lobby; the labor lobby.* ❖ *v.* **-bied, -by•ing, -bies** —*intr.* To try to influence the thinking of legislators or other public officials for or against a specific cause: *lobbying for stronger environmental safeguards; lobbied against the proliferation of nuclear arms.* —*tr.* **1.** To try to influence public officials on behalf of or against (proposed legislation, for example): *lobbied the bill through Congress; lobbied the bill to a negative vote.* **2.** To try to influence (an official) to take a desired action. [Medieval Latin *lobia*, monastic cloister, of Germanic origin.] —**lob′by•er, lob′by•ist** *n.* —**lob′by•ism** *n.*

lobe (lōb) *n.* **1.** A rounded projection, especially a rounded, projecting anatomical part: *the lobe of an ear.* **2.** A subdivision of a bodily organ or part bounded by fissures, connective tissue, or other structural boundaries. [Middle English, from Old French, from Late Latin *lobus*, hull, pod, from Greek *lobos*, lobe, pod.]

lo•bec•to•my (lō-bĕk′tə-mē) *n., pl.* **-mies** Surgical excision of a lobe, as of the lung.

lobed (lōbd) *adj.* Having a lobe or lobes: *lobed leaves.*

lobe•fin (lōb′fĭn′) *n.* See **lobe-finned fish.**

lobe-finned fish (lōb′fĭnd′) *n.* A member of the subclass Crossopterygii, a group of bony fishes with paired rounded fins, suggesting limbs, that are extinct except for the coelacanths. The lobe-finned fishes are regarded by some as ancestors of amphibians and other terrestrial vertebrates. Also called *crossopterygian, lobefin.*

lo•be•li•a (lō-bē′lē-ə, -bēl′yə) *n.* Any of numerous plants of the genus *Lobelia*, having terminal racemes of variously colored flowers with a bilabiate corolla. [New Latin *Lobelia*, genus name, after Matthias de *Lobel* (1538–1616), Flemish botanist and physician.]

Lo•bi•to (lō-bē′tō) A city of west-central Angola on **Lobito Bay,** an inlet of the Atlantic Ocean. It is the country's chief port. Population: 120,000.

♦ **lob•lol•ly** (lŏb′lŏl′ē) *n., pl.* **-lies 1.** *Chiefly Southern U.S.* A mudhole; a mire. **2.** The loblolly pine. [Perhaps dialectal *lob*, to bubble + *lolly*, broth.]

Regional Note *Loblolly* is a combination of *lob*, probably an onomatopoeia for the thick heavy bubbling of cooking porridge, and *lolly*, an old British dialect word for "broth, soup, or any other food boiled in a pot." Thus, *loblolly* originally denoted thick porridge or gruel, especially that eaten by sailors onboard ship. In the southern United States, the word is used to mean "a mudhole; a mire," a sense derived from an allusion to the consistency of porridge. The name *loblolly* has become associated with several varieties of trees as well, all of which favor wet bottomlands or swamps in the Gulf and South Atlantic states.

loblolly pine *n.* A pine *(Pinus taeda)* of the southeast United States, having needles in fascicles of three, oblong cones, and strong wood used as lumber and for paper pulp.

♦ **lo•bo** (lō′bō) *n., pl.* **-bos** *Chiefly Texas* The gray wolf. [Spanish, wolf, from Latin *lupus*. See **wl̥kʷo-** in Appendix I.]

lo•bo•la (lō′bə-lə) *n.* A set amount paid by a prospective husband to the bride's family among certain peoples in southern Africa. [Zulu *-lóbólà*, dowry, give a dowry.]

lo•bot•o•mize (lə-bŏt′ə-mīz′, lō-) *tr.v.* **-mized, -miz•ing, -miz•es 1.** To perform a lobotomy on (a patient). **2.** To deprive (a person) of energy or vitality.

lo•bot•o•my (lə-bŏt′ə-mē, lō-) *n., pl.* **-mies** Surgical incision into the frontal lobe of the brain to sever one or more nerve tracts, a technique formerly used to treat certain mental disorders but now rarely performed. [LOBE + -TOMY.]

lob•scouse (lŏb′skous′) *n.* A sailor's stew made of meat, vegetables, and hardtack. [Perhaps dialectal *lob*, to bubble + *scouse*, of unknown origin.]

lob•ster (lŏb′stər) *n.* **1.** Any of several edible marine crustaceans of the family Homaridae, especially of the genus *Homarus*, having stalked eyes, long antennae, and five pairs of legs, the first pair of which is modified into large pincers. **2.** Any of several crustaceans, such as the spiny lobster, that are related to the lobsters. **3.** The flesh of a lobster used as food. ❖ *intr.v.* **-stered, -ster•ing, -sters** To search for and catch lobsters. [Middle English *lopster, lobstere*, from Old English *loppestre*, alteration (perhaps influenced by *loppe, lobbe*, spider) of Latin *locusta*.] —**lob′ster•er** *n.*

Word History A lobster and a locust may share a common source for their name, that is, the Latin word *locusta*, which was used for the locust and also for a crustacean that was probably a kind of lobster. We can see that *locusta* would be the source of *locust*, but it looks like an unlikely candidate as the source of *lobster*. It is thought, however, that Old English *loppestre*, the ancestor of *lobster*, was formed from *locusta* and the suffix *-estre* used to make agent nouns (our *-ster*). The change from Latin *locusta* to Old English *loppestre* may have been influenced by Old English *loppe*, meaning "spider."

lob•ster•man (lŏb′stər-mən) *n.* **1.** A man whose occupation is catching lobsters. **2.** A ship used in locating and catching lobsters.

lobster pot *n.* A slatted cage with an opening covered by a funnel-shaped net, used for trapping lobsters.

lobster ther•mi•dor (thûr′mĭ-dôr′) *n.* A dish consisting of cooked lobster meat mixed with a cream sauce, put into a lobster shell, sprinkled with cheese, and browned. [After French *Thermidor*, the 11th month of the calendar used during the French Revolution : Greek *thermē*, heat; see THERM + Greek *dōron*, gift; see **dō-** in Appendix I.]

lob•u•late (lŏb′yə-lāt′) also **lob•u•lat•ed** (-lā′tĭd) *adj.* Having or consisting of lobules. —**lob′u•la′tion** *n.*

lob•ule (lŏb′yo͞ol) *n.* **1.** A small lobe. **2.** A section or subdivision of a lobe. —**lob′u•lar** (-yə-lər), **lob′u•lose′** (-yə-lōs′) *adj.* —**lob′u•lar•ly** *adv.*

lob•worm (lŏb′wûrm′) *n.* See **lugworm.** [Alteration (influenced by LOB, lump, something hanging) of LUGWORM.]

loc. *abbr.* locative

lo•cal (lō′kəl) *adj.* **1a.** Of, relating to, or characteristic of a particular place: *a local custom; the local slang.* **b.** Of or relating to a city, town, or district rather than a larger area: *state and local government.* **2.** Not broad or general; not widespread: *local outbreaks of flu.* **3.** Of or affecting a specific part of the body: *a local infection.* **4.** Making all possible or scheduled stops on a route; not express: *a local train.* ❖ *n.* **1.** A public conveyance that makes several intermediate stops before the final destination is reached: *changed trains to a local.* **2.** A local chapter or branch of an organization, especially of a labor union. **3.** A local anesthetic. **4.** *Informal* A person from a particular locality. [Middle English, from Old French, from Late Latin *locālis*, from Latin *locus*, place.] —**lo′cal•ly** *adv.* —**lo′cal•ness** *n.*

local anesthesia *n.* Anesthesia characterized by the loss of sensation only in the area of the body where an anesthetic drug is applied or injected.

local anesthetic *n.* An anesthetic drug that induces local anesthesia by inhibiting nerve excitation or conduction.

local area network *n.* LAN.

local color *n.* **1.** The interest or flavor of a locality imparted by the customs and sights peculiar to it. **2.** The use of regional detail in a literary or an artistic work.

lo•cale (lō-kăl′) *n.* **1.** A place, especially with reference to a particular event: *the locale of a crime.* **2.** The scene or setting, as of a novel. [From French *local*, local, locale, from Old French. See LOCAL.]

lo•cal•ism (lō′kə-lĭz′əm) *n.* **1a.** A local linguistic feature. **b.** A local custom or peculiarity. **2.** Devotion to local interests and customs. —**lo′cal•ist** *n.*

lo•cal•i•ty (lō-kăl′ĭ-tē) *n., pl.* **-ties 1.** A particular neighborhood, place, or district: *"Localities, even individual villages, developed their own languages"* (Wall Street Journal). **2.** The fact or quality of having position in space. [French *localité*, from Late Latin *locālitās*, from *locālis*, local. See LOCAL.]

lo•cal•ize (lō′kə-līz′) *v.* **-ized, -iz•ing, -iz•es** —*tr.* **1.** To make local: *decentralize and localize political authority.* **2.** To confine or restrict to a particular locality: *localized the infection.* **3.** To attribute to a particular locality: *sought to localize the origin of the rumor.* —*intr.* To become local, especially to become fixed in one area or part. —**lo′cal•i•za′tion** (-kə-lĭ-zā′shən) *n.*

lo•cal•ized (lō′kə-līzd′) *adj.* **1.** Restricted to a particular place. **2.** *Medicine* Restricted or limited to a specific body part or region: *localized pain and numbness.*

local option *n.* The power granted to a local political subdivision to decide whether to apply a law, such as a ban on liquor sales, within its jurisdiction.

Lo•car•no (lō-kär′nō) A town of southern Switzerland at the northern end of Lake Maggiore. The Locarno Pact between Germany and various European powers was signed here in 1925, in an effort to promote peace and maintain existing territorial borders. Today the city is a popular resort. Population: 14,430.

lo•cate (lō′kāt′, lō-kāt′) *v.* **-cat•ed, -cat•ing, -cates** —*tr.* **1.** To determine or specify the position or limits of: *locate Albany on the map; managed to locate the site of the old artists' colony.* **2.** To find by searching, examining, or experimenting: *locate the source of error.* **3.** To place at a certain location; station or situate: *locate an agent in Rochester.* —*intr.* To become established; settle. [Latin *locāre*, *locāt-*, to place, from *locus*, place.] —**lo′cat′a•ble** *adj.* —**lo′cat′er** *n.*

EXHIBIT D

Merriam-Webster's Collegiate® Dictionary

TENTH EDITION

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mething heavy, laborious, or disheartening : BURDEN ⟨a ...ed down with debts⟩ b : to place as a burden or obligation ...work on him⟩ 3 a : to increase the weight of by adding ...eavy b : to add a conditioning substance (as a mineral ...body c : to weight or shape (dice) to fall unfairly d : to ...-sided or prejudicial influences : BIAS e : to charge with ...anings (as emotional associations or hidden implications) ...(as a test) with factors influencing validity or outcome 4 ...ly in abundance or excess : HEAP, PACK b : to put runners ...ond, and third bases) in baseball 5 a : to put a load or ...device or piece of equipment) ⟨~ a gun⟩ b : to place or ...a load in a device or piece of equipment ⟨~ film in a camera ...program into a computer⟩ 6 : to alter (as an alcoholic ...adding an adulterant or drug 7 a : to add a load to (an ...emium) b : to add a sum to after profits and expenses are ...for ⟨~ed prices⟩ ~ vi 1 : to receive a load 2 : to put a ...in a carrier, device, or container; esp : to insert the charge or ...the chamber of a firearm 3 : to go or go in as a load ...ing onto a bus⟩ — **load·er** n

...(1886) 1 slang : HIGH 12b 2 : having a large amount of ...

...r (1943) : the percentage of available seats paid for and ...in aircraft

...5c) 1 : a cargo, weight, or stress placed on something 2 ...: material used to load something : FILLER

...(ca. 1859) : the line on a ship indicating the depth to which ...the water when properly loaded — see PLIMSOLL MARK illus-

...\'lōd-,mas-tər\ n (1961) : a crew member of a transport ...is in charge of the cargo

...var of LODESTAR

...var of LODESTONE

...pl **loaves** \'lōvz\ [ME lof, fr. OE hlāf; akin to OHG hleib ...2c) 1 : a shaped or molded mass of bread 2 : a shaped or ...symmetrical mass of food 3 slang Brit : HEAD, MIND

...b; back-formation fr. loafer] (1835) : to spend time in idle-

...er\ n [perh. short for landloafer, fr. G Landläufer tramp, ...Läufer runner] (1830) : one that loafs : IDLER

...mark — used for a low step-in shoe

...chiefly Northern & Midland 'lüm, NewEng also 'lu̇m\ n ...OE lām clay, mud; akin to OE līm lime] (12c) 1 a : a ...for plastering) composed chiefly of moistened clay b : a ...ding sand used in founding 2 : SOIL; specif : a soil consist...ble mixture of varying proportions of clay, silt, and sand — ...ē, 'lü-, 'lu̇-\ adj

...[ME lon, fr. ON lān; akin to OE lǣn loan, lēon to lend, L ...eave, Gk leipein] (12c) 1 a : money lent at interest b ...ent usu. for the borrower's temporary use 2 a : the ...porary use b : the temporary duty of a person transferred ...ob for a limited time 3 : LOANWORD

...: LEND — **loan·able** \'lō-nə-bəl\ adj

...verb loan is one of the words English settlers brought to ...d continued to use after it had died out in Britain. Its use ...oticed by British visitors and somewhat later by the New ...erati, who considered it a bit provincial. It was flatly de...ing in 1870 by a popular commentator, who based his ob...etymology. A later scholar showed that the commentator ...nt of Old English and thus unsound in his objection, but by ...too late, as the condemnation had been picked up by many ...mentators. Although a surprising number of critics still ...ctions, loan is entirely standard as a verb. You should note ...d only literally; lend is the verb used for figurative expres...as "lending a hand" or "lending enchantment."

...old interj (1808) — used to express wonder or surprise

...ar\ n (1926) : one (as a car or a watch) that is lent esp. as ...t for something being repaired

...in\ n [ME loning, fr. lone, alter. of lane] (14c) 1 dial Brit ...ial Brit : a milking yard

...r (1905) : one who lends money to individuals at exorbi...interest

...ing \-,shär-kiŋ\ n (1914) : the practice of lending money ...t rates of interest

...ation n (ca. 1933) : a compound, derivative, or phrase that ...ed into a language through translation of the constituents of ...other language (as superman from German Übermensch)

...'lōn-,wərd\ n (1874) : a word taken from another language ...artly naturalized

...lōth\ also **loathe** \'lōth, 'lōth\ adj [ME loth loathsome, fr. ...in to OHG leid loathsome, OIr lius loathing] (12c) : unwill...mething contrary to one's ways of thinking : RELUCTANT ...INCLINED — **loath·ness** n

...vt **loathed; loath·ing** [ME lothen, fr. OE lāthian to ...hateful, fr. lāth] (12c) : to dislike greatly and often with ...tolerance : DETEST **syn** see HATE — **loath·er** n

...(14c) : extreme disgust : DETESTATION

...th-lē, 'lōth-\ adj (bef. 12c) : LOATHSOME, REPULSIVE

...th-lē, 'lōth-\ adv (15c) : not willingly : RELUCTANTLY

...'lōth-səm, 'lōth-\ adj [ME lothsum, fr. loth evil, fr. OE ...adj] (14c) : giving rise to loathing : DISGUSTING — **loath**... — **loath·some·ness** n

...[prob. of LG origin; akin to LG lubbe coarse person] ...: a dull heavy person : LOUT

...bed; **lob·bing** [lob a loosely hanging object] vt (1599) 1 ...heavily : DROOP 2 : to throw, hit, or propel easily or in a ...1 a : to move slowly and heavily b : to move in an ...a tennis ball easily in a high arc

...a soft high-arching shot, throw, or kick

...comb form [lobe] : lobe ⟨lobar⟩ ⟨lobotomy⟩

...-bär\ adj (ca. 1856) : of or relating to a lobe

...bāt\ also **lo·bat·ed** \-,bā-təd\ adj [NL lobatus, fr. LL ...760) 1 : LOBED 2 : resembling a lobe — **lo·ba·tion** \lō-

...ē\ n, pl **lobbies** [ML lobium gallery, of Gmc origin; akin to OHG louba porch] (1593) 1 : a corridor or hall connected with a larger room or series of rooms and used as a passageway or waiting room: as a : an anteroom of a legislative chamber; esp : one of two anterooms of a British parliamentary chamber to which members go to vote during a division b : a large hall serving as a foyer (as of a hotel or theater) 2 : a group of persons engaged in lobbying esp. as representatives of a particular interest group

²lobby vb **lob·bied; lob·by·ing** vi (1837) : to conduct activities aimed at influencing public officials and esp. members of a legislative body on legislation ~ vt 1 : to promote (as a project) or secure the passage of (as legislation) by influencing public officials 2 : to attempt to influence or sway (as a public official) toward a desired action — **lob·by·er** n — **lob·by·ism** \-,i-zəm\ n — **lob·by·ist** \-ist\ n

lob·by·gow \'lä-bē-,gau̇\ n [origin unknown] (1906) : an errand boy

lobe \'lōb\ n [MF, fr. LL lobus, fr. Gk lobos] (1541) : a curved or rounded projection or division; specif : a usu. somewhat rounded projection or division of a bodily organ or part

lo·bec·to·my \lō-'bek-tə-mē\ n, pl **-mies** [ISV] (ca. 1911) : surgical removal of a lobe of an organ (as a lung) or gland (as the thyroid)

lobed \'lōbd\ adj (1787) : having lobes ⟨palmately ~ leaves⟩

lobe–fin \'lōb-,fin\ n (1941) : CROSSOPTERYGIAN — **lobe–finned** \-'find\ adj

lo·be·lia \lō-'bēl-yə, -'bē-lē-ə\ n [NL, fr. Matthias de Lobel †1616 Flem. botanist] (1739) 1 : any of a genus (Lobelia of the family Lobeliaceae, the lobelia family) of widely cultivated plants having terminal clusters of showy lipped flowers 2 : the leaves and tops of Indian tobacco

lo·be·line \'lō-bə-,lēn\ n [NL Lobelia + E ²-ine] (1852) : a crystalline alkaloid $C_{22}H_{27}NO_2$ that is obtained from Indian tobacco and is used chiefly as a respiratory stimulant and as a smoking deterrent

lob·lol·ly \'läb-,lä-lē\ n, pl **-lies** [prob. fr. E dial. lob to boil + obs. E dial. lolly broth] (1597) 1 dial a : a thick gruel b : MIRE, MUDHOLE 2 dial : LOUT 3 : LOBLOLLY PINE

loblolly pine n (1760) : a pine (Pinus taeda) of the southeastern U.S. with flaky bark, long needles in groups of three, and cones having spine-tipped scales; also : its coarse-grained wood

lo·bo \'lō-(,)bō\ n, pl **lobos** [Sp, wolf, fr. L lupus — more at WOLF] (1839) : GRAY WOLF

lo·bot·o·mise Brit var of LOBOTOMIZE

lo·bot·o·mize \lō-'bä-tə-,mīz\ vt **-mized; -miz·ing** (1943) 1 : to perform a lobotomy on 2 : to deprive of sensitivity, intelligence, or vitality ⟨fear of prosecution was causing the press to ~ itself —Tony Eprile⟩

lo·bot·o·my \lō-'bä-tə-mē\ n, pl **-mies** [ISV] (1936) : surgical severance of nerve fibers connecting the frontal lobes to the thalamus for the relief of some mental disorders

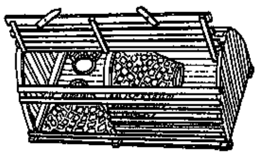
lob·scouse \'läb-,skau̇s\ n [origin unknown] (1706) : a sailor's dish of stewed or baked meat with vegetables and hardtack

lob·ster \'läb-stər\ n, often attrib [ME, fr. OE loppestre, fr. loppe spider] (bef. 12c) 1 : any of a family (Nephropidae and esp. Homarus americanus) of large edible marine decapod crustaceans that have stalked eyes, a pair of large claws, and a long abdomen and that include species from coasts on both sides of the No. Atlantic and from the Cape of Good Hope 2 : SPINY LOBSTER — **lob·ster·like** \-,līk\ adj

lob·ster·ing \'läb-st(ə-)riŋ\ n (1881) : the activity or business of catching lobsters

lob·ster·man \-mən\ n (1881) : one whose business is lobstering

lobster pot n (1764) : an oblong case with slat sides and a funnel-shaped net used to trap lobsters — called also lobster trap



lobster pot

lobster shift n (ca. 1933) : a work shift (as on a newspaper) that covers the late evening and early morning hours — called also lobster trick

lobster ther·mi·dor \-'thər-mə-,dȯr\ n [thermidor, fr. F, fr. Thermidor, drama (1891) by Victorien Sardou] (1930) : cooked lobster meat in a rich wine sauce stuffed into a lobster shell and browned

lob·u·lar \'lä-byə-lər\ adj (1826) : of, relating to, affecting, or resembling a lobule

lob·u·lat·ed \'lä-byə-,lā-təd\ also **lob·u·late** \-,lāt\ adj (1783) : made up of or having lobules ⟨the pancreas is a ~ organ⟩ — **lob·u·la·tion** \,lä-byə-'lā-shən\ n

lob·ule \'lä-(,)byü(ə)l\ n (1682) : a small lobe; also : a subdivision of a lobe

¹lo·cal \'lō-kəl\ adj [ME localle, fr. MF local, fr. LL localis, fr. L locus place — more at STALL] (15c) 1 : characterized by or relating to position in space : having a definite spatial form or location 2 a : of, relating to, or characteristic of a particular place : not general or widespread b : of, relating to, or applicable to part of a whole 3 a : primarily serving the needs of a particular limited district b of a public conveyance : making all the stops on a route 4 : involving or affecting only a restricted part of the organism : TOPICAL 5 : of or relating to telephone communication within a specified area

²local n (ca. 1824) : a local person or thing: as a : a local public conveyance (as a train or an elevator) b : a local or particular branch, lodge, or chapter of an organization (as a labor union) c Brit : a nearby or neighborhood pub

local area network n (1981) : a network of personal computers in a small area (as an office) that are linked by cable, can communicate directly with other devices in the network, and can share resources

local color n (1884) : the presentation of the features and peculiarities of a particular locality and its inhabitants in writing

EXHIBIT E

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local, *a.* and *n.*

SECOND EDITION 1989

(ˈləʊkəl) Also 5-6 **localle**, 5-7 **locall**, 6 **locale**. [a. F. *local* (= Sp., Pg. *local*, It. *locale*), ad. L. *locāl-is*, f. *loc-us* place.]

A. *adj.*

1. a. Pertaining to or concerned with ‘place’ or position in space. Now chiefly in ***local situation***.

1485 CAXTON *Chas. Gt.* 1 And also in recountyng of hye hystoryes the comune vnderstondyng is better content to the ymag[i]nacion local than to symple auctoryte to which it is submysed. *Ibid.* Envoy 250 The ymagynacion locall. **1561** T. NORTON *Calvin's Inst.* IV. xvii. (1634) 675 *marg.*, A local presence of the body of Christ. **1590** SHAKES. *Mids. N.* V. i. 17 (1st Qo. Fisher 1600) G3 The Poets penne turnes them to shapes, And giues to ayery nothing, a locall habitation, And a name. **1659** PEARSON *Creed* (1839) 335 As to a local descent into the infernal parts they all agree. **1706** W. JONES *Syn. Palmar. Matheseos* 46 Some of these Powers have borrowed their Denominations from Local Extension. **1777** PRIESTLEY *Matt. & Spir.* (1782) I. xix. 231 The Cartesians..maintain..that spirits have no extension, nor local presence. **1818** CRUISE *Digest* (ed. 2) VI. 341 The local situation of the lands devised. **1862** STANLEY *Jew. Ch.* (1877) I. v. 109 This change of local situation was at once a change of moral condition.

†**b.** Having the attribute of ‘place’ or spatial position. *Obs.*

1533 FRITH *Answ. More* (1548) 55 Y^e Lord, whiche to shewe his humanite to be locall (that is to saye: contained in one place onely) dyd saye vnto his disciples. I ascende vnto my father. *Ibid.* 55b, Howe dyd he ascende in to heauen, but because he is locall and a very man. **1565** JEWEL *Replie Harding's Answ.* VI. 348 His [Harding's] answeare is, that Christes bodie is Local onely in one place. **1577** tr. *Bullinger's Decades* (1592) 734 Angels peraduenture at this daie are more aptly saide to bee locall or in place not circumscriptiuely, but definitiuely. **1621** BURTON *Anat. Mel.* II. ii. III. (1651) 246 [They] will have Hell a materiall and local fire in the center of the earth. **1718** PRIOR *Solomon* I. 564 A higher flight the venturous goddess tries, Leaving material worlds, and local skies. **1729** SWIFT *Direct. Birthday Song* 272 That sound divine the truth has spoke all, And pawn'd his word, Hell is not local.

†**c.** ***local motion***, movement from place to place, motion of translation, locomotion. *Obs.*

1561 EDEN *Arte Nauig.* I. viii. 10 The elementes are..moueable by locall motion. **1644** DIGBY *Nat. Bodies* xxiii. 208 Zoophytes..that is such creatures as though they goe not from place to place, and so cause a locall motion of their whole substance, yet in their partes, they haue a distinct and articulate motion. **1678** CUDWORTH *Intell. Syst.* I. v. 831 It is certain, that cogitation, (phancy, intellection, and volition) are no local motions. **1707** *Curios. in Husb. & Gard.* 34 Plants have no local or progressive Motion.

d. *Grammar*. Relating to place or situation.

1842 JELF *Greek Gram.* II. 230 [*heading*] Local Dative. **1845** *Ibid.* I. 296 [Adverbs] are divided into *a*. Local,..*b*. Temporal,..*c*. Modal [etc.]. *Ibid.* 298 The Local adverbs in ει, as..ἐκεῖ. **1889** E. A. SONNENSCHEIN *Lat. Gram.* §348 Local Clauses. (Clauses of Place.)

e. Psychol. ***local sign*** (after G. *localzeichen*): that element in a sensation which is the basis of our instinctive judgement as to its locality.

1874 SULLY *Sensation & Intuition* 70. **1884** BOSANQUET tr. *Lotze's Metaph.* 490.

2. a. Belonging to a particular place on the earth's surface; pertaining to or existing in a particular region or district.
local time: the time of day or night reckoned from the instant of transit of the mean sun over the local meridian.

?14.. in *Myrr. our Ladye* p. xxi, Priuileges ordynary iniunccions localle statutes laudable custons decrees & al other ordynaunces. **1612** SELDEN *Illustr. Drayton's Poly-olb.* i. init., If in Prose and Religion it were as iustifiable, as in Poetry and Fiction, to inuoke a Locall power..I would therin ioyne with the Author. **1687** in *Magd. Coll. & Jas. II* (O.H.S.) 112 That College had the Bishop of Winchester for their Visitor Local. **1740** PITT *Æneid* VIII. 461 The Swains the Local Majesty rever'd. **1792** *Anecd. W. Pitt* II. xxix. 125, I have no local attachments; it is indifferent to me, whether a man was rocked in his cradle on this side or that side of the Tweed. **1833** HERSCHEL *Astron.* iii. 139 Two observatories..provided with accurate means of determining their respective local times. **1849** MACAULAY *Hist. Eng.* v. I. 612 *note*, Oldmixon, who was a boy at Bridgewater when the battle was fought,..was so much under the influence of local passions that his local information was useless to him. **1868** GLADSTONE *Juv. Mundi*

ii. (1870) 31 The name Γραῖα..is only a local name of a settlement of..Boeotians. **1891** E. PEACOCK *N. Brendon* II. 313 Mr. Yeo, the local lawyer. **1968** H. FRANKLIN *Crash* i. 9 Our estimated time of arrival at Cairo is 17.45 local time, 15.45 G.M.T. **1973** 'E. FERRARS' *Small World of Murder* ii. 20 She had not adjusted her watch to local time. **1974** 'A. HAIG' *Peruvian Printout* 99 Arrive Lima 0730hrs local time.

b. With restrictive force: Limited or peculiar to a particular place or places.

1615 G. SANDYS *Trav.* 170 Those ceremonies that are not locall, I willingly omit. **1781** COWPER *Retirement* 119 Truth is not local, God alike pervades And fills the world of traffic and the shades. **1811** *Henry & Isabella* I. 3 Her ideas were as local as Andrew's; and they neither of them seemed likely to disturb the brain of the other. **1860** MOTLEY *Netherl.* (1868) I. i. 5 The importance of the struggle would have been more local and temporary. **1871** MORLEY *Carlyle* in *Crit. Misc.* Ser. I. (1878) 189 That letter (of the moral law) read in our own casual and local interpretation.

c. Belonging to a town or some comparatively small district, as distinct from the state or country as a whole. ***local government***, the administration of the affairs of a town (or other limited area) by its inhabitants, as distinguished from such administration by the state at large. ***local authority***, an administrative body in local government (cf. AUTHORITY 3). Also *attrib.*

local board: in England and Wales *spec.* (see quots. 1863 and 1901). ***Local Government Board***: a department of State established in 1871, to act as the central authority for Local Government in England and Wales.

1688 *Connect. Col. Rec.* (1859) III. 439 The law that doth confirm o^r locall lawes. **1776** ADAM SMITH *W.N.* V. i. (1869) II. 402 The local or provincial expenses of which the benefit is local or provincial..ought to be no burden upon the general revenue of the Society. **1786** BURKE *W. Hastings* Wks. 1842 II. 191 He the said Warren Hastings hath left the said troops, by his new treaty, without any local controul. **1818** HALLAM *Mid. Ages* (1872) I. 128 Such is the national importance which a merely local privilege may sometimes bestow. **1844** H. H. WILSON *Brit. India* III. 279 The local government was involved in a discussion with the Supreme Court at the Presidency. **1861** MILL *Repr. Govt.* xv. 273 Things..which would be best left to local authorities if there were any whose authority extended to the entire metropolis. **1861** *Ibid.* 278 Among the duties classed as local, or performed by local functionaries, there are many which might with equal propriety be termed national. **1863** H. COX *Instit.* III. ix. 732-3 In the places and districts in which the [Local Government] Act is adopted, it is carried into execution by local Boards..The local Boards have extensive powers of undertaking and regulating the drainage and cleansing of towns, the suppression of nuisances, and similar matters of police. **1880** E. ROBERTSON in *Encycl. Brit.* XI. 21 Local government repeats on a small scale the features of the supreme government, but its business is chiefly judicial and administrative. **1897** *Lancet* 20 Feb. 537/1 [A Bill] which has for its object the superannuation of the officers and servants of local authorities. This latter term has a wide significance, as it includes practically all local bodies having sanitary and parochial functions, outside boards of guardians and other authorities, to which the Poor Law Officers Superannuation Act of last session relates. **1901** FAIRLIE *Munic. Administr.* 69 An important change..was made by the Local Government Act of 1894..The urban local boards are called Urban District Councils, and the term of office of the councillors is fixed at three years. **1909** *Daily Chron.* 22 July 5/3 There would soon be a growth in the number of local authority training colleges. **1937** *Discovery* Jan. p. viii, The difficulty of persuading local authorities to provide funds. **1956** J. M. RICHARDS in A. Pryce-Jones *New Outl. Mod. Knowl.* 380 The best British local-authority housing. **1972** M. GILBERT *Body of Girl* iv. 40 We put her into a local authority home..and she stayed there until she was fourteen. **1973** *Inverness Courier* 31 July 4/4 It was noted with regret that a teacher from Kingussie High had been offered, but turned down, a local authority house, and it was left with the Clerk to tell the county housing factor.

d. In various specific collocations. ***local call***, a telephone call within a prescribed area around a telephone exchange (opp. a long-distance call); ***local cluster*** Astr., a cluster of stars (within the Galaxy) to which the sun belongs; also = *local group*; ***local examination***, the name given to certain examinations of boys and girls, held in a number of different places under the direction of a central board at one of the Universities; ***local exchange*** (see quot. 1940); ***local group*** (also with capital initials) Astr., the cluster of about twenty galaxies to which our own galaxy belongs; †also = *local cluster*; ***local line***, a railway line used by local or stopping trains (opp. *main line*); ***local paper***, a newspaper distributed only in a certain area and usu. featuring local, as distinct from national, news; ***local preacher*** (among the Methodists), a layman who is authorized to preach in the district in which he resides, as distinguished from the ordained itinerant ministers; ***local radio***, radio that serves a local area only; ***local rank*** (see quot. 1876); ***local room*** U.S., the reporters' room in a newspaper office; ***local supercluster*** or ***supergalaxy*** Astr., a supercluster to which it is thought the 'local group' belongs; ***local talent***, talented people, *spec.* (*colloq.*) the attractive women, in a particular locality; ***local veto***: the prohibition of the sale of liquors in a district, under the system of LOCAL OPTION (see e); hence the nonce-wds. ***local-vetoist***, ***-vetoism***.

1927 E. MURRAY *Post Office* viii. 138 A fixed annual charge for the installation together with a uniform fee for each effective local call. **1975** D. BAGLEY *Snow Tiger* xv. 124 The exchange has a bank of batteries... We're all right for local calls.

1922 H. S. JONES *Gen. Astron.* xiv. 359 We must therefore conclude that our stellar universe has a longest diameter of at least 300,000 light-years... It seems probable that the Sun is near the centre of a large local cluster situated eccentrically in this larger system. **1938** W. M. SMART *Stellar Dynamics* i. 2 There is some evidence that the stars in the neighbourhood of the sun form a loose cluster—known as the local cluster—with characteristics of distribution somewhat different from those of the galactic system as a whole. **1971** *New Scientist* 29 July 245/1 The Supergalaxy is, in turn, composed of smaller clusters of galaxies, including the local cluster of about a dozen members, our Galaxy being one of them.

1858 *Exam. Students Not Members Univ. Camb.* 15 Notice for Local Examinations. **1861** *4th Ann. Rep. Delegacy* (*Local Exam.*) 1 The Oxford Local Examinations for the year 1861 commenced on Tuesday, May 28.

1940 *Chambers's Techn. Dict.* 507/2 *Local exchange*, the exchange to which a given subscriber has a direct line.

1918 J. C. KAPTEYN in *Astrophysical Jrnl.* XLVII. 106 Within this boundary the B0-B5 stars are about 12 times and the B8-B9 stars about 5·7 times more numerous than in the surrounding regions. This alone proves..that we have to do with a local group which probably does not extend in depth much farther than it does laterally. **1922** H. S. JONES *Gen. Astron.* xiv. 359 On the above hypothesis it must be assumed that the B-type stars belong mainly to the local group, for stars of this type do not increase in number with decreasing apparent magnitude as rapidly as do other types. **1936** E. HUBBLE *Realm of Nebulæ* vi. 125 The known members of the 'local group' are the galactic system with the Magellanic Clouds as its two companions; M31 with M32 and NGC 205 as its companions; M33, NGC 6822 and 1C 1613. **1939** SKILLING & RICHARDSON *Astron.* xvii. 543 The two large spirals.., M31 and M33, belong to what Hubble calls the Local Group of nebulae. **1965** *Listener* 2 Dec. 891/2 The Andromeda Spiral and the [Magellanic] Clouds belong to what is termed the 'local group'. **1971** D. W. SCIAMA *Mod. Cosmol.* iii. 40 They [*sc.* galaxies] show considerable clustering, ranging from pairs of galaxies through clusters with fifteen or twenty members like the local group, up to clusters such as the one in Virgo containing several thousand galaxies.

1869 *Bradshaw's Railway Manual* XXI. 86 The question was accordingly referred to the arbitration of Captain Galton, who decided that the Midland might work the local line with Cheltenham..but that it ought not to work the main line. **1967** G. F. FIENNES *I tried to run a Railway* iv. 43 At Seven Kings we went down the local line.

1837 DICKENS *Pickw.* xlix. 532 If it gets into one of the local papers, it will be the making of me. **1883** Local paper [see PAPER *n.* 8]. **1947** G. GREENE *19 Stories* 78 No book-shops, just *Film Fun* and the local paper. **1967** R. RENDELL *New Lease of Death* ix. 88 Elizabeth Crilling sat..reading the Situations Vacant in last week's local paper.

1772 WESLEY *Wks.* (1872) III. 476 A Justice levied a fine on a Local Preacher, on pretence of the Conventicle Act. **1885** *Min. Wesleyan Confer.* 369 Our supply of Ministers is drawn from our Local-preachers.

1966 *Economist* 1 Oct. 22/2 That aim should be the creation of a legal framework within which it would be possible to establish, without subsidy, a large number of low-powered local radio transmitting stations. **1971** *Guardian* 17 Nov. 10/6 The real question..is whether local radio can make a good profit and still be local radio. **1974** *Ibid.* 23 Mar. 10/1 Capital Radio, the general commercial radio in London..[is] in competition with four BBC networks and BBC Local Radio.

1876 VOYLE & STEVENSON *Milit. Dict.* (ed. 3) 327 *Local rank,* the rank given to an officer in her Majesty's service serving in a foreign land with other troops, whereby he is placed in his proper position, as regards equality of rank, with those officers whose first commissions are of the same date, but who have been more fortunate in promotion.

1890 *Scribner's Monthly* Aug. 157/2 We were all talking about it one night..in the local room. **1903** E. L. SHUMAN *Pract. Journalism* 90 Almost the only open door to the editorial room is through the local room. **1948** *Chicago Tribune* IV. 18 Jan. 2/3 The usual banter that goes on in a local room after presstime.

1958 *Nature* 29 Nov. 1479/2 We assume that the local supercluster is in a state of differential rotation and differential expansion about its centre in the Virgo cluster. **1971** *New Scientist* 29 July 245/1 They analyse the distribution, first of normal bright galaxies known to belong to a local supercluster of galaxies, and then of quasars and some peculiar galaxies.

1953 *Astron. Jrnl.* LVIII. 30 (*heading*) Evidence for a local supergalaxy. **1974** *Encycl. Brit. Macropædia* VII. 830/1 Evidence found in the early 1950s gave strong support to the concept of a ‘local supergalaxy’.

1947 M. GILBERT *Close Quarters* xii. 175 You can play darts and engage the local talent in gossip. **1972** R. QUILTY *Tenth Session* 138 He's not the sort who would import local talent just for the hell of it. **1975** *Times* 18 Feb. 13/3 So much ‘local’ talent, so much unearthed by chance... Is the crafts revival the illustration of the desire for independence and self-sufficiency?

1894 SIR W. LAWSON in *Westm. Rev.* 27 Sept. 4/3 What would happen if they, the Local Vetoists, got their bill? **1900** A. J. BALFOUR in *Daily News* 29 May 2/5 Perhaps the hon. baronet would reverse his opinion about the infallibility of democracies, or even of local vetoism.

e. local option. The right granted by the legislature of a country or state to the inhabitants of each particular district to decide whether the trade in liquor shall be prohibited within the district. Hence occas. by extension, the principle of allowing localities to decide for themselves whether they will accept or reject certain regulations. Hence **local optionism**, the principle of local option; **local optionist**, an advocate of local option.

1878 SAMUELSON *Hist. Drink* 218 *note*, The tendency of legislation seems to be towards 'local option' or 'permissive prohibition'. **1880** *Daily News* 28 Jan. 2/4 The Home Rulers, the Teetotallers, the Local Optionists. **1882** *Encycl. Brit.* XIV. 688/2 Those celebrated 'local option laws' which are in force in some of the United States. *Ibid.* 689/1 Such laws are in force in Massachusetts, New Jersey (which had the Chatham Local Option Law of 1871), New Hampshire, Connecticut, and Vermont. **1882** M. ARNOLD *Irish Ess.* 174 Measures like that for granting Local Option, as it is called, for doing away the addiction of our lower class to their porter and their gin. **1901** *Scotsman* 28 Feb. 6/3 The reluctance of the Welsh and Midland miners to admit the principle of local option.

3. *Law*. (In renderings of the AF. phrases *chose local*, *trespas local*.)

1598 KITCHIN *Courts Leet* 180b, Pur ceo que le chose est local, & annex al franketeñ. **1607** J. COWELL *Interpr.* s.v. *Chose*, Chose locall is such a thing as is annexed to a place. For example: a mill is chose locall. [With reference to Kitchin.] **1708** *Termes de la Ley* 419 An Action of Trespass for Battery, is transitory and not local, and therefore the place need not be..set down in the Declaration. **1727-41** CHAMBERS *Cycl.* s.v. *Trespass*, *Trespass local* is that which is so annexed to the place certain, that if the defendant join issue upon a place, and traverse the place mentioned in the declaration, and aver it; it is enough to defeat the action.

4. Pertaining to a particular place in a system, series, etc., or to a particular portion of an object. **a.** Pertaining to, or affecting, a particular part or organ of the body. Chiefly *Med.*, of diseases, ailments, etc., and hence of remedies which are applied to such ailments.

1541 R. COPLAND *Guydon's Formul.* Rijb, The fyrste shal be of the locall remedyes of hote apostemes. **1543** TRAHERON *Vigo's Chirurg.* 25b/2 The doctours make no mention of locale medicines in these diseases. **1606** SHAKES. *Tr. & Cr.* IV. v. 244 Tell me you Heauens, in which part of his body Shall I destroy him? Whether there, or there, or there, That I may giue the locall wound a name. **1667** MILTON *P.L.* XII. 387 Dream not of thir fight, As of a Duel, or the local wounds Of head or heel. **1706** PHILLIPS (ed. Kersey), *Local Medicaments*, those Remedies that are apply'd outwardly to a particular Place, or Part; as Plaisters, Salves, Ointments, etc. **1804** ABERNETHY *Surg. Obs.* 145, I employed only local means for their cure. **1813** J. THOMSON *Lect. Inflam.* 179 The Local or Topical treatment of inflammation. **1834** *Cycl. Pract. Med.* III. 49/1 The symptoms may be considered as local and general, the *local* being, principally, pain, tenderness, and tumefaction; the *general*, fever [etc.]. **1874** SULLY *Sensation & Intuition* 56 The exquisite delicacy of local sensibility, especially that of the retina. **1899** *Allbutt's Syst. Med.* VII. 11 A local inflammation or hæmorrhage.

b. *Electricity* and *Magnetism*. ***local action***, action between different parts of a plate in an electric battery as distinguished from the general action of the battery. ***local attraction*** (see quot. 1867). ***local battery***, ***local circuit*** (see quot. 1868). ***local current***, a current set up by local action; also, a current in a local circuit. ***local oscillator*** (Radio and Television), an oscillator in a receiver that generates oscillations (***local oscillations***) with which an incoming signal is heterodyned.

1841 BRANDE *Man. Chem.* (ed. 5) 297 In the common battery..much local action takes place upon the zinc plates without contributing to the circulating forces. **1867** SMYTH *Sailor's Word-bk.*, *Local attraction*, the effect of the iron in a ship on her compasses; it varies with the position of a compass in a ship, also with that of a ship on the earth's surface, and with the direction of the ship's head. **1868** CULLEY *Handbk. Telegr.* (ed. 3) 169 *Local circuit*, one which includes only the apparatus in the office, and is closed by a relay... *Local* [*battery*], the battery of a local circuit. **1876** PREECE & SIVEWRIGHT *Telegraphy* 101 We then work by local currents. *Ibid.*, A local battery. *Ibid.* 102 In flowing through R´ it..completes the local circuit by which the local current flows from L´ B´ through M´ . [**1908** R. A. FESSENDEN in *Electrician* 4 Sept. 787/2 The heterodyne receiver, in which a local field of force actuated by a continuous source of high-frequency oscillations interacts with a field produced by the received oscillations and creates beats of an audible frequency.] **1913** *Proc. IRE* July 102 In the apparatus using a local oscillation generator in combination with a standard rectifier receiver electrical beats are produced and utilized. **1919** R. STANLEY *Text-bk. Wireless Telegr.* (new ed.) II. viii. 143 With an independent local oscillator C.W. reception can take place with very loosely coupled circuits. **1931** [see HETERODYNE *a.*]. **1967** WHARTON & HOWORTH *Princ. Telev. Reception* v. 74 The function of the mixer is to multiply together the received and local oscillator signals so as to produce an output at the intermediate frequency. **1972** *Sci. Amer.* Feb. 76/1 Radio telescopes receive signals that are at too high a frequency to be recorded directly on magnetic tape. Independent local oscillators must therefore be used to 'heterodyne' the radio-frequency signal..to a much lower intermediate frequency.

c. Arith. ***local value***: that value (of a numeral figure) that depends on its place or serial position.

1853 BARN. SMITH *Arith. & Algebra* (1857) 2 All numbers have a simple or intrinsic value, and also a local value.

d. Photogr. ***local reduction*** (see quot.).

1892 BOTHAMLEY *Ilford Man. Photogr.* viii. 68 Local reduction (*i.e.* reduction of parts of the image) can be effected by..applying a very weak solution of the ferricyanide.

e. local colour: (*a*) *Painting*. The colour which is natural to each object or part of a picture independently of the general colour-scheme or the distribution of light and shade. (Now usu. *collect. sing.*: formerly the pl. was used.) (*b*) Hence, in works of art or literature: The representation in vivid detail of the characteristic features of a particular period or country (e.g. manners, dress, scenery, etc.), in order to produce an impression of actuality. (*c*) Something picturesque in itself. Also ***local colouring***, ***colourist***.

1721 BAILEY, *Local Colours*, in painting, are such as are natural and proper for each particular Object in a Picture. **1782** J. T. DILLON tr. *Mengs' Sk. Art Paint.* 76 The local tints of the flesh, in every part are admirably diversified. *Ibid.* 80 If Titian was happy in his tints, and the local colour of his objects, Correggio..exceeded him in [etc.]. **1797** *Encycl. Brit.* (ed. 3) XIII. 599/2 The happy dispositions of colours both proper and local. **1821** CRAIG *Lect. Drawing* i. 15 The objects were all drawn..with a pen and..then thinly washed over with indications of their local colours. **1854** *Chambers's Jrnl.* 7 Jan. 8/2 Local colouring—*couleur locale*—is a modern expression signifying the accordance..of the adjuncts in a work of art..with the..subject. **1859** GULLICK & TIMBS *Paint.* 8 The local colour, which is the self colour of an object, and what we mean when we talk of a 'red coat' or a 'green field'. **1884** *Sat. Rev.* 22 Nov. 666/2 There are [in *Doris*] some capital pictures of the times of landlord shooting..without any~thing Irish in character, or dialogue, or local colour. **1904** F. M. COLBY *Imaginary Obligations* 7 Stupendous 'local color' work going on at every railway junction, and you heed it not. **1912** A. T. SLOSSON (*title*) A local colorist. **1934** *Amer. Speech* IX. 111/2 Villages with 'local color'. **1949** A. HUXLEY *Let.* 6 Mar. (1969) 593 About the country in which they lived you might consult, for local colour, a travel book by..Freya Stark. **1959** *Listener* 15 Oct. 616/1 [Henry] James never needed such ironic advice, since he was not a local colourist.

5. Pertaining to places (in the geographical sense) or to an individual place as such.

> **1605** CAMDEN *Rem., Surnames* (1614) 112 The most surnames in number, the most ancient, and of best account, haue bene local, deduced from places in Normandie and the coyntries confining. **1857** R. MORRIS (*title*) The Etymology of Local Names. *Mod.* One of the most trustworthy of local etymologists.

6. *Math.* Pertaining to a locus. ***local problem***, a problem in which the object is to determine a geometrical locus.

> **1704** HARRIS *Lex. Techn., Local Problem.* ***a*** **1865** SIR W. R. HAMILTON *Elem. Quatern.* (1899) I. 39 The degree of the function *f*, or of the local equation, marks (as before) the order of the curve [etc.].

B. *n.* (absol. use of the adj.)

1. a. A person who is attached by his occupation, function, etc. to some particular place or district; an inhabitant of a particular locality. Chiefly *pl.*

> **1835** HOOD *Poetry, Prose, & Worse* xxxv, How sweet to be drawn for the locals By songs setting valour a-gog. **1891** 'H. HALIBURTON' *Ochil Idylls* 148 Gang freely, fishers, by their banks, Baith foreign loons an' locals. **1900** *Westm. Gaz.* 16 Mar. 1/3 He has been what is known in the legal world as a 'local'—that is, he has confined his practice to courts of Lancashire, and has not taken up a professional abode in London. **1901** H. G. HUTCHINSON in *Longm. Mag.* July 236 We go to some 'rough' as the locals call it—ground of long grass..giving fine protection for partridges.

b. *esp.* A local preacher (see A. 2d).

> **1824** CARR *Craven Dial.* Gloss. 90 *Local*, a local preacher amongst the Methodists. **1889** T. E. BROWN *Manx Witch*, etc. 121 He cudn go on by the hour Like these Locals.

2. Something local. **a.** An item of local interest in a newspaper; *collect.*, local news, matter of local interest.

> ***a*** **1869** W. CARLETON *Farm Ballads, Editor's Guest* 36 So long as the paper was crowded with 'locals' containing their names. **1888** BARRIE *When a Man's Single* (1900) 17/1 There's a column of local coming in, and a concert in the People's Hall.

b. A postage-stamp current only in a certain district. **c.** *U.S.* Postal matter bearing an address locally used but not known generally.

1870 *Routledge's Ev. Boy's Ann.* Feb. Suppl. 3/1 The apparently interminable Russian locals. **1873** *Ibid.* Jan. Suppl. 4 Russian and Egyptian Locals. **1882** *U.S. Offic. Postal Guide* 681 Locals and nixes. Matter addressed to places which are not post offices is unmailable.

d. *Telegraphy*. A local battery or circuit (see A. 4b).

1875 KNIGHT *Dict. Mech.*

e. A local train; a train which serves the stations of a particular district, or which stops at all or most of the stations on a line (opp. an *express train*).

1879 WEBSTER Suppl., *Local*..an accommodation railway train, which receives and deposits passengers and freight along the line of the road. **1902** *Strand Mag.* Jan. 74/2 He boarded the local in the morning. **1955** AUDEN *Shield of Achilles* i. 21 Any junction at which you leave the express For a local that swerves off soon into a cutting. **1975** S. JOHNSON *Urbane Guerilla* I. 21 The downtown local was already at the platform.

f. A local examination (see A. 2d).

1893 *Athenæum* 4 Feb. 157/3 This [book] is intended mainly for students preparing for..the University Locals.

g. A local branch of a trade union. *N. Amer.*

1888 *Nation* (N.Y.) 3 May 356/3 The Knights of Labor have locals of engineers and firemen. **1911** M. W. OVINGTON *Half a Man* 98 Strong organizations in the South, as the bricklayers, send men North with union membership, who easily transfer to New York locals. **1949** *Newsweek* 18 Apr. 29/1 The local announced..miners would refuse to work in the pits with him. **1967** *Boston Herald* 1 Apr. 1/7 Nicholas P. Morrissey, New England regional director of the Teamsters Union, said Boston Local 25 will vote Sunday at 10 a.m. in the Charlestown armory. **1971** D. RAMSAY *Little Murder Music* 121 Statement of Detective Anthony Crawley, deputed to question members of Local 6, American Federation of Musicians. **1972** *Evening Telegram* (St. John's, Newfoundland) 24 June 3/2 A trawler..had taken aboard approximately 100,000 pounds of fish, according to Jack Dodd, president of the fishermen's local.

h. (Usu. ***the local***.) The public house in the immediate neighbourhood. *colloq.*

1934 *Evening News* 11 Sept. 10/1 After a modest beer or two at the ‘local’, bedtime calls about nine o'clock. **1937** ‘T. SHY’ in L. Russell *Press Gang!* 178 What about a snort at the local? **1943** *R.A.F. Jrnl.* Aug. 4 Someone..has done him a good turn by..standing him a drink in the 'local'. **1954** L. M. BOSTON *Children of Green Knowe* 120 The story about it is widespread. It has been told me in much the same form in different 'locals' all over the country. **1957** J. BRAINE *Room at Top* x. 92 The Siege Gun was our local. **1970** G. GREER *Female Eunuch* 142 Women don't nip down to the local.

ADDITIONS SERIES 1993

local, *a.* and *n.*

Add: **[A.] [2.]** **[d.]** ***local area network*** *Computing*, a network by means of which computers are enabled to communicate with each other, the quality of communication being higher than that achieved in wide area networks because of the relative proximity of the computers, which are typically in the same building or on the same site.

1977 A. R. WEST in *Special Publ. Nat. Bureau Standards* (U.S.) No. 500-31 (*heading*) *Local area networks at Queen Mary College. **1978** *Proc. IEEE* LXVI. 1497/2 The first local area networks evolved in environments in which the distances to be spanned..were within the range of inexpensive high-speed digital communication technologies. **1985** *Which Computer?* Apr. 57/3 The other product line it developed was the Polynet local area network. **1991** *Mod. Power Syst.* Sept. 47/1 The new plant needed a system..that offered..digital event logging to a host computer over a local area network.

ADDITIONS SERIES 1997

local, *a.* and *n.*

Add: **[B.] [1.]** **c.** *Finance* (orig. *U.S.*). An independent trader in options or futures who acts on his or her own account.

1969 R. J. TEWELES et al. *Commodity Futures Trading Guide* ii. 25 Floor traders trading for their own accounts are sometimes referred to as 'locals'. **1975** G. GOLD *Mod. Commodity Futures* (rev. ed.) vii. 58 Floor traders who trade for their own account are known as 'scalpers' or 'locals'. **1984** *Times* 19 May 23/3 Liffe needs more 'locals'—private investors—to give it a more speculative flavour. **1986** *Times* 14 Jan. 17/7 For a maximum fee of £10,000 individuals could become trading members of the market [*sc.* the London Commodity Exchange], opening the way to locals on the

American pattern. *Ibid.* 18 Dec. 24/4 Some 60 locals do business on the London International Financial Futures Exchange. **1995** *Independent* 6 Mar. 17/2 For seven years her husband, Fergus, was a ‘local’ on the Liffe exchange, trading on his own account, which means *with his own money*.

[2.] i. Short for ‘local anaesthetic’ (see sense 4 a of the adj.).

1961 in WEBSTER. **1970** ‘J. HERRIOT’ *If only they could Talk* xxv. 153 A few c.c.'s of local in there and I could twist it off easily with the spoons. **1971** D. FRANCIS *Bonecrack* vii. 93 He..shot the freezing local in Indigo's near fore. **1978** *Rugby World* Apr. 21 A player with severe toothache had to be given a ‘local’ before the match. **1988** J. MCINERNEY *Story of My Life* xii. 181 I've heard they give you Demerol.., but the doctor says for outpatients all they recommend is a local.

EXHIBIT F

NEWTON's TELECOM DICTIONARY

22nd Edition

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NEWTON's TELECOM DICTIONARY

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of connector types. Also check for additional front ports - these are convenient. You should look for composite, S-video and component video as a minimum set of analog jacks so you can use your existing analog audio equipment with the new set.

- Compatibility. If you are purchasing a separate set and tuner, be sure you verify that the tuner is compatible with the set you are purchasing, as well as the satellite/cable you expect to use, and is also capable of receiving over-the-air broadcasts. Some HD-tuners require an add-on module (8VSB) to receive OTA (Over The Air) Broadcasts. Also make sure the HDTV set will work with all your other components: VCR, DVD player, video game consoles, sound system, etc.

Other questions to consider:

- Are all cables included and compatible with your audio-video components?
- Do you have a surge protector to protect your investment? If a storm approaches, we recommend not relying on the surge arrestor. Unplug the system and wait for the storm to past.
- What type of external antenna (if any) do you need for OTA (over the air) broadcasts in your area?
- Is delivery and set up included? This is especially important for the 'big-screen' projection sets, which can be heavy.
- Check for in-home maintenance/tune up contract - this may be an important consideration for large projector systems that require periodic adjustments.

HDTV does not, of course, affect a movie's plot. Samuel Goldwyn, film producer, once said, "A wide screen just makes a bad film twice as bad." See also ATV, DTV, Goldwyn, Samuel, NTSC and SDTV.

HDTV-Ready A television set capable of displaying a full high definition picture because of its high screen resolution. See HDTV.

HDX Half DupleX.

HDWDM Hyper Dense Wavelength Division Multiplexing.—128 wavelengths and higher. See DWDM.

HE See Head End.

head 1. A device that reads, writes, or erases data on a storage medium. The device which comes in contact with or comes very close to the magnetic storage device (disk, diskette, drum, tape) and reads and/or writes to the medium. In computer devices, it performs the same function as the head on a home cassette tape recorder. Hard disks use one head for each side of each platter. The heads are attached to a common head-movement area, so that all heads move in unison. The heads are always positioned over the same logical track on each side of each platter. A head crash occurs when the head physically hits the media.

2. A sub-component accessory which serves a translator type function for signal being input to some larger system or instrument. Many pieces of test equipment have various available plug-in "sampling heads" which allow the equipment to be used with a variety of different signal types. The most common type is probably optical-to-electrical converters which convert an optical signal for display on an oscilloscope.

3. A term for a toilet. The "head" was so named because it was in the ship's bow (the front) by the catheads. On sailing ships all smelly activities, i.e., the head, the galley, and the crew's quarters were all placed in the ship's bow so the wind could blow the smell away. That way the officers and high-quality passengers who berthed in the stern were not offended.

head crash See head.

head end 1. The originating point of a signal in cable TV systems. At the head end, you'll often find large satellite receiving antennas. Now increasingly spelled headend.

2. A central control device required within some LAN/MAN systems to provide such centralized functions as remodulation, re-timing, message accountability, contention control, diagnostic control, and access.

Head End Hop Off HEHO. A method of traffic engineering whereby calls are completed by using long distance facilities directly off the switch that serves that location.

head fake Suckers rally in share prices on Wall Street. See Suckers Rally.

head landing zone In older hard drives, the head landing zone is an area of the hard disk set aside for take off and landing of the heads when the drive is turned on and off. In newer drives, the heads are retracted.

head on collision Descriptive of a condition in message telephony when two switching exchanges seize a both ways trunk at the same instant and attempt to send outbound call instructions to each other.

head slap Similar to head crash but occurs while the drive is turned off. It usually occurs during mishandling or shipping. Head slap can cause permanent damage to a hard disk drive.

head thrashing A term for rapid back and forth movements of the disk head of a hard drive.

headend The originating point of a signal in cable TV systems. At the head end, you'll often find large satellite receiving antennas.

header 1. Protocol control information located at the beginning of a protocol data unit.

2. The portion of a message that contains information that will guide the message to the correct destination. This information contains such things as the sender's and receiver's addresses, precedence level, routing instructions, and synchronization pulses.

header area The area containing preliminary information for the entire document, such as the data, company name, address, purchase order, terms, etc. An EDI (Electronic Data Interchange) term.

Header Error Control HEC. An 8-bit CRC code contained within the header of an ATM data cell. The HEC is used for checking the integrity of the cell header at the various cell switches.

header information William Safire defines it as data at the top of a credit report which the Federal Trade Commission says may be disclosed by any credit bureau with no restrictions. This includes your name, address, phone number (listed or not), social security number and mother's maiden name.

headless server A server computer with no monitor attached.

headroom A term used in the structured cabling industry to indicate additional clearance or signal margin room above the specification. This is measured in Decibels and is related to the Attenuation to Cross-Talk Ratio (ACR).

headset A telephone transmitter and receiver assembly worn on the head. Headsets are now very light and very comfortable and are no longer worn only by switchboard attendants and airline clerks. They are worn by telemarketers, customer service reps. stock brokers, order entry reps, financial service professionals, and some executives who spend a lot of time on the phone.

headset jack A place on a phone or console into which you can plug a headset.

heads-up Back in the mid-twentieth century, when someone called out "heads up!" listeners knew to lift up their heads and watch out for something dangerous.

hearing aid compatible A hearing aid compatible phone may be used with inductively coupled hearing aid devices. You can find hearing aid compatible coin phones by looking for the blue grommet between the handset and the cord.

Hearing Carry Over HCO. A form of TRS (Telecommunication Relay Service) where a person with a speech disability is able to listen to the other end user and, in reply, a Communications Assistant speaks the text as typed by the person with the speech disability. See TRS.

Hearing Designation Order HDO. A Federal Communications Commission term, a Hearing Designation Order institutes a comparative or other adjudicatory hearing proceeding, usually before an Administrative Law Judge.

heartbeat Ethernet-defined SQE signal quality test function, defined in IEEE 802.3. Heartbeat is created by a circuit (normally part of the transceiver) that generates a collision signal at the end of a transmission. This signal is used by the controller interface for self-testing.

heartbeat support A function that generates a frame periodically, even if no data is sent, for network management purposes.

heat Electromagnetic waves of a frequency between that of light waves and radio waves. A form of energy.

heat distortion Distortion of a material due to the effects of heat.

heat coil An electrical protection device used to prevent equipment from overheating as a result of foreign voltages that do not trigger voltage limiting devices. It typically consists of a coil of fine wire around a brass tube that encloses a pin soldered with a low-melting alloy. When abnormal currents occur, the coil heats the brass to soften the solder, allowing the spring-loaded pin to move against a ground plate directing currents to ground.

heat shock A test to determine stability of a material by sudden exposure to a high temperature for a short period of time.

heatseeker The person who can be depended on to purchase the latest version of any existing software product as soon as it comes on the market.

heaven Everybody wants to go to Heaven, but nobody wants to die - ancient Chinese fortune cookie.

heavy iron Hardware, really BIG hardware. Contemporary hardware hardly qualifies.

EXHIBIT G

Telecommunications Regulation: Cable, Broadcasting, Satellite, and the Internet

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Part C FORMS DIRECTORY

APPENDIX E Glossary of Terms

4-APPENDIX E Telecommunications & Cable Regulation 1

Glossary of Terms

Access Channels: Those channels of a cable system made available to members of the public on a free or leased basis and over which the cable operator can exercise no power of censorship.

Addressability: Addressable technology allows cable operators to remotely and selectively activate or deactivate a subscriber's converter. Two-way addressable converters enable a subscriber to communicate with the headend for purposes such as program selection, if the cable system offers pay-per-view.

Amplifier: A device used to boost the strength of an electronic signal. Amplifiers are spaced at intervals throughout a cable system to rebuild the strength of television signals which weaken as they pass through the cable network.

Amplitude Modulated Link: A technique for linking cable grids or branch lines by high-frequency microwave rather than coaxial trunk line. Reduces the cost of wiring rural regions or congested urban areas.

Anti-Siphoning: FCC rules that formerly prevented cable systems from "siphoning off" movies and sports programming for pay cable channels that otherwise would be seen on conventional broadcast TV.

Attenuation: The decrease of signal strength as it progresses from source to receiver. It is a function of the transmission medium, distance, and frequencies being transmitted.

Basic Cable: The main service of cable television normally consisting of improved reception and increased availability of retransmitted local and distant broadcasting signals, nonpay satellite signals, and alphanumeric information channels.

Blacking Out: Cable systems are forbidden to carry, and therefore must "black out", certain programs carried on broadcast signals. See also Sports Blackout and Nonduplication.

Booster: A relay device retransmitting broadcast signals at increased power on the same frequencies as those originally received. See also Translator.

Broadband Communication: Any electronic delivery system having the capacity to carry a wide range of electromagnetic frequencies. Cable is "broadband," while telephone and telegraph circuits are "narrow band." See also Coaxial Cable.

Broadcast Band: Generally, the medium wave (standard AM) radio broadcast frequency allocation (535 kHz-1, 605 kHz). Can also apply to any other segment of such frequencies allocated for a particular broadcast service.

Broadcasting: The dissemination of radio communications intended for reception by the public directly or through relay stations.

Cablecasting: Term often used synonymously for any nonbroadcast signals carried by a cable system, but more accurately employed to describe only that locally originated programming produced and distributed by the cable operator on the channel authorized for such service. See also Local Origination.

Cable Powering: A method of supplying power through the coaxial cable to system amplifiers.

Cable TV: The modern designation for a communications system which delivers by wire to those households or subscribers paying a fee for such service a number of broadcast and nonbroadcast channels of entertainment and information.

Cable Television Channel: A frequency Band 6 MHz in width within which a standard television broadcast signal is delivered by cable to a subscriber terminal.

Cable Television Relay Service (CARS): A microwave service intended for use by cable television system owners or operators for the purpose of importing television signals for use over the system.

Cable Television Relay (CAR) Station: A fixed or mobile station used for the transmission of television and related audio signals, signals of standard and FM broadcast stations, signals of instructional television fixed stations, and cablecasting from the point of reception to a terminal point from which the signals are distributed to the public by cable.

Cable Television System: According to the FCC definition: any facility that, in whole or in part, receives directly, or indirectly over the air, and amplifies or otherwise modifies the signals transmitting programs broadcast by one or more television or radio stations and distributes such signals by wire or cable to subscribing members of the public who pay for such service, but such term shall not include: (1) any such facility that serves fewer than 50 subscribers; or (2) any such facility that serves only the residents of one or more apartment dwellings under common ownership, control, or management, and commercial establishments located on the premises of such an apartment house. Note: In general, each separate and distinct community or municipal entity including single, discrete, unincorporated areas served by cable television facilities constitutes a separate cable television system, even if there is a single headend and identical ownership of facilities extended into several communities.

Call Sign: Station identification consisting of a combination of letters and sometimes also of numerals, required by broadcasting regulation.

Carriage: The conveyance or retransmission of a broadcast signal.

Cascade: The placement of devices in a continuous sequence. The customary placement of spaced-out amplifiers along a cable system.

Central Distribution Center: A building centrally located within a community in which the cable system facilities for local programming production are contained and where both distant and local signals are processed and sent out over the main trunk cable.

Certificate of Compliance: Authorization issued by the FCC until 1978, for the operation of a cable television system in a community or authority issued to allow carriage of additional television signals by an operating cable television system. See also Registration Statement.

Channel: A specified band of frequencies assigned to convey the transmissions of a particular broadcast station, which for U.S. television encompasses 6MHz of frequencies, a range of frequencies which could also carry 600 radio or 240 FM channels.

-- Class I Cable Channel. Channel used to deliver broadcast signals to subscribers.

-- Class II Cable Channel. Channel used to deliver cablecast programming to subscriber sets without decoders.

-- Class III Cable Channel. Channel used to deliver cablecasting programming requiring special subscriber terminal equipment, such as encoded (pay or information) programming, facsimile or printed message material.

-- Class IV Cable Channel. Return or response channel on two-way system.

Channel Capacity: The number of channels that may be simultaneously transmitted on a cable system.

Circuit: An arrangement of transmission facilities to meet a particular need for communication between points.

Clipping: The removal of that portion of a signal above or below a pre-set level.

Closed Circuit: Television or sound program channel or channels not involving broadcasting but used to transmit program material for a specific purpose or audience.

Coaxial Cable: An extremely efficient two-conductor, common-axis design for the carriage of a wide range of frequencies (now approaching zero to 300,000 MHz, in contrast to telephone wire's 200 MHz-5,000 MHz) which provides a single conduit with the capacity to carry more than fifty channels of television dimension, or a far greater number of audio messages, simultaneously. See also Channel.

Co-Channel: Any two or more TV signals are considered co-channel when their video carriers, either off-air or after conversion by CATV equipment, occupy the same TV channel.

Communications Common Carrier: An entity offering communication relay service available for hire on a nondiscriminatory basis to the general public. Common carriers exercise no control over the information transmitted.

Communications-Satellite Service: A method of using a satellite to relay signals to earth stations for direct or indirect distribution by terrestrial transmitting stations.

Community Unit: A cable television system, or portion of a cable television system, that operates or will operate within a separate and distinct community or municipal entity (including unincorporated communities within unincorporated areas and including single, discrete unincorporated areas).

Compulsory License: Provision of the Copyright Act of 1976 that allows cable operators to retransmit broadcast signals, upon payment of a statutory royalty fee, without individually negotiating with copyright holders.

Contour: A line defining a broadcast station's coverage patterns. A grade A contour encompasses the area in which a good picture is normally available at least 90 percent of the time in the most favorable 50 percent of all receiver locations.

Converter: Any device changing the frequency of a signal. A converter in the "head end" of a cable system normally changes all UHF signals received into VHF frequencies to facilitate delivery to the more effective VHF tuning band (channels 2-13) of the average television receiver. A "set top," or subscriber terminal converter, may alter band A (typically broadcast) or band B (typically non-broadcast) frequencies to double the twelve-channel VHF reception capacity; or unscramble coded signals employed in informational or "pay-TV" services.

Copyright Royalty Tribunal: An independent agency within the legislative branch which consists of three commissioners appointed by the President with the advice and consent of the Senate for a term of seven years each. The Commission has the power to make determinations concerning the adjustment of the copyright royalty rates in section 111 (cable system royalty fees) in accordance with the provisions specified in Section 801(2) of the Copyright Act. It also has the duty to distribute the royalty fees deposited with the Register of Copyrights under sections 111 and 116.

Cross Modulation: A form of TV signal distortion where the signal of an unwanted station appears as an interference with the desired station through the process of inter-modulation.

Cross-Ownership: Ownership of two or more kinds of communications outlets by the same individual or business. The FCC prohibits television stations and telephone companies from owning cable systems in their service areas. Television networks are prohibited from owning cable systems anywhere in the U.S.

Decoder: A set-top device which enables a home subscriber to convert an electronically scrambled picture into a viewable signal.

Definition: Distinctness or clarity of picture.

Direct Broadcast Satellite: A video or television delivery technology that delivers signals directly from a satellite to a home through the use of a small earth station.

Distant Signal: A signal carried beyond the predicted grade B contour of the station transmitting it.

Distant Signal Equivalent: The value assigned for copyright royalty purposes to the secondary transmission of any non-network television programming carried by a cable system in whole or in part beyond the local service area of the primary transmitter of such programming.

Distortion: An undesired change in wave form of a signal in the course of its passage through a transmission system.

Distribution System: The part of a CATV system used to carry signals at the end of the feed line from the system head-end to subscribers' receivers. Often applied, more narrowly, to the part of a CATV system starting at the bridger amplifiers.

Docket: Designation applied by FCC to hearing cases.

Domsat: Abbreviation for domestic satellite.

Downlink: The signal from a sky satellite to an earth receiver station.

Downstream: The usual flow of signals from the "head-end," or originating point, of the system to the subscriber terminal.

Drop: The wire in a cable television system that goes from the cable in the street to the subscriber's television set.

Duplication: Cable carriage of a "distant signal" providing the same programming as that transmitted by a "local station." See also Nonduplication.

Earth Stations: Ground terminals that use antennas and associated electronic equipment to transmit, receive and process communications via satellite.

Electronic News Gathering (ENG): A system using a mobile TV camera which relays corresponding program information via a microwave link. For television broadcast licensees, three bands, at 2, 7 and 13 GHz are available for this purpose.

Exclusivity: The contractual right to be the sole exhibitor of a program in a particular area for a specified period of time.

Fairness Doctrine: The requirement enforced by the FCC that broadcast stations, and cable systems on origination channels, present opportunities for airing conflicting views on issues of public importance.

Feeder: Intermediate cable distribution lines that connect the main trunk lines to the smaller house drops that lead into residences.

Fiber Optics: The technique of conveying light or images through a particular configuration of glass or plastic fibers. The bandwidth capacity of fiber optic cable is much greater than that of conventional cable or copper wire.

Footprint: Term used to describe the geographical coverage area of a satellite's transmission.

Fragmentation: The concept that cable's multiple-program offerings divide the viewing attention of a local station's audience among a greater number of channels, thus reducing the percentage of those watching a local station.

Franchise: An agreement between a cable operator and a governmental body defining the rights and obligations of each with respect to the communication services to be provided the community involved. In a technical sense, "franchise" denotes an exclusive grant, while "license" would be the more accurate term for each governmental authorization to operate a cable system on a nonexclusive basis.

Franchise Fee: Annual fee collected from the cable operator by the franchise authority.

Frequency: The rate at which a wave of electrical current alternates, measured in H 3 .

Frequency Allocation: The reservation by the FCC of a particular band of frequencies for the use of a specific broadcast service or other services.

Frequency Assignment: The granting of a specific channel of frequencies to a particular broadcaster or other spectrum user.

Full Network Station: A commercial television station that in weekly "prime-time" hours usually carries 85 percent of the hours of programming offered by one of the three major networks with which it has a primary affiliation.

Fully Integrated System: A CATV system designed to take advantage of the optimum amplifier-cable relationship for highest performance at lowest cost.

Gigahertz (GHz): GHz is billions of cycles per second.

Grade A Contour: The line demarcating an area within which broadcast signals have sufficient strength to enable viewers to receive them at 90 percent of the locations for at least 70 percent of the time.

Grade B Contour: The line demarcating an area within which broadcast signals have sufficient strength to enable viewers to receive them at 90 percent of the locations for at least 50 percent of the time.

Grandfathering: Exempting cable systems from certain federal rules because: (1) they were in existence or operation before the rules; or (2) substantial investments were made in system construction before the rules. Grandfathering was applied to signal carriage, access channels and the certification process in the 1972 Cable Rules.

Head End: The electronic equipment located at the start of a cable system, usually including antennas, preamplifiers, frequency converters, demodulators, modulators, and related equipment.

Hertz (Hz) Cycles per Second: A measure of bandwidth and frequency.

House Drop: The coaxial cable that connects each building or home to the nearest feeder line of the cable network.

Hub: A location in a cable distribution system that serves as a mini headend by distributing signals from the main trunk cable to feeder cables.

Importation: Distribution of distant broadcast signals. Typically relayed to the CATV headend by microwave or satellite.

Incasting: The process of sending signals upstream within a cable system, or from a subscriber to the headend.

Independent Station: A commercial television station that in "prime time" usually carries not more than ten hours per week of programming offered by the three major networks.

Interactive Mode: A cable system that allows two-way communication, including contact between subscriber and operator, or contacts among groups of subscribers.

Interconnect: To link CATV headends, usually with microwave, so that subscribers to different cable systems can see the same programming simultaneously.

Leapfrogging: Importation by a cable system of a broadcast signal from a distant market while bypassing the signals of a station closer to the system.

Leaseback: The practice by telephone companies of installing and maintaining CATV distribution systems, and leasing the facilities back to separate contractors for operation of the system.

Leased Channel: In addition to cable-originated channels and over-the-air broadcast carriage channels, cable systems can lease their channels to other entities. Channels can be leased by groups or individuals for the sole use of the lessee at posted rates.

Local Distribution System (LDS): A wide band microwave system or cable microwave distribution system which is capable of transporting a number of television signals simultaneously. LDS stations are used by cable systems to distribute cable programming and related signals from central headend hubs to sub-headend locations, from which the signals are distributed to subscribers via cable.

Local Origination: Programming produced by the system which delivers it, ranging from automated displays of time and weather to live and videotaped features produced by the operator or members of the public.

Local Origination Center: A studio equipped with cameras, recorders, etc., used to produce community cablecasts within the cable system operator's franchise area.

Local Origination Channel: A channel on a cable system (exclusive of broadcast signals) which is programmed by the cable operator and subject to its exclusive control.

Local Signals: Television signals that are received at locations that are within the station's Predicted Grade B Contour. Cable systems must carry all local signals in their areas.

Local Station: Any television station placing a signal of Grade B Contour or better over any portion of the area in which a cable system is operating. Can also refer to any television station located within thirty-five miles of any portion of a cable system.

Low Power Television (LPTV): A television station or translator with low transmitting power that originates television programming. See also Translator.

Main Trunk: The major link from the headend to feeder lines.

Major Market: The specified zone of a commercial television station licensed to a top-100 community.

Mandatory Carriage: Signals that a cable system must carry in accordance with FCC regulations. See also Must Carry.

Master Antenna Television System (MATV): An antenna system that serves a concentration of television sets such as an apartment building, hotel or motel.

Megahertz (MHz): MHz is millions of cycles per second.

Microwave: High-frequency transmission facility used to relay messages, including television signals from point to point, by common carrier.

Minimum Channel Capacity: The minimum number of channels a cable system formerly had to provide in accordance with FCC regulations. Systems in the top 100 markets were required to provide 20 channel capacity (actual or potential). Also, for each broadcast signal carried, they were required to provide an additional channel suitable for non-broadcast signals (Class II and III cable television channels).

Minimum Service: A minimum number of signals that, taking television market size into account, a cable system was required to carry in accordance with former FCC regulations.

Modulator: The electronic equipment required to combine video and audio signals from a studio and convert them to radio frequencies (R-F) for distribution on a cable system. Also, a very low-powered television signal generator used to provide signals for distribution on a CATV system.

Multiple Cable System: A system using more than a single cable in its distribution system. For example, an existing 12 channel system can be enlarged to a 24 channel system by installing a completely duplicate plant, or dual cable system, which carries the same 12 channels, but with different program material. At the subscriber's set would be an effective cable selector switch so that he could choose channels on Cable A or Cable B.

Multipoint Distribution System (MDS): A common carrier Super High Frequency service (2150-2160 MHz) authorized by the FCC to transmit specialized private TV programming or data and facsimile transmission to customer-selected locations. MDS is line-of-sight, so is limited by terrain and other obstructions. A converter is needed to unscramble the signal.

Multiple System Operator (MSO): An entity which owns and operates a number of cable facilities.

"Must Carry" Signal: Local broadcast signal that must be carried by cable systems in accordance with FCC regulations.

National Association of Broadcasters (NAB): The national trade organization of the broadcasting industry (radio and television stations and networks). Founded in 1922, the NAB represents the industry before the FCC, Congress and state regulatory bodies.

National Association of Regulatory Utility Commissioners (NARUC): This is a national organization of state and federal regulatory officials with supervisory responsibility for intrastate telephone and other telecommunications public utility services.

National Cable Television Association (NCTA): The national trade organization of the cable TV industry. NCTA was chartered in 1952. NCTA represents the industry before the FCC, Congress, state regulatory bodies and on technical television industry committees.

Network: Group of radio or television outlets linked by cable or microwave that transmit identical programs simultaneously, or the company that produces programs for them. The three national commercial television networks are the American Broadcasting Corporation (ABC), Columbia Broadcasting System (CBS), and National Broadcasting Corporation (NBC).

Network Programming: The programming supplied by a national or regional television network, commercial or noncommercial.

Nonduplication: Restraint imposed upon cable carrier of "distant signals" offering the same programming as that transmitted by a "local station." At various times, the FCC has prohibited such "duplication" for thirty days from time of transmission, for fifteen days prior to and subsequent to time of transmission, and for one day from time of transmission.

Non-Switched System: A common cable system design in which messages are sent to and received by all points on the system simultaneously.

Notice of Proposed Rulemaking: Issued by the Commission when it is proposing a specific change to the FCC Rules and Regulations.

Occasional Service: Service performed or facilities supplied on a per occasion basis for a limited duration of time.

Off-Network Series: Reruns of network series syndicated or distributed by a means other than simultaneous network distribution.

Origination Cablecasting: Programming (exclusive of broadcast signals) carried on a cable television system over one or more channels and subject to the exclusive control of the cable operator.

Partial Network Station: A commercial television station that in "prime time" usually carries more than ten hours per week of programming offered by the three major television networks, but less than the 85 percent specified for "full-network stations."

Pay Cable: Programming offered on a cable system with fees assessed above and beyond basic cable charges.

Pay-Per-View: Pay programming for which charges are assessed by the individual program requested. In a cable system, either an addressable or interactive converter is required to allow programming to be received on a pay-per-view basis.

Pay-TV: A system of television in which viewers pay directly for programming not available on advertiser-supported TV. Electronically scrambled signals are distributed and descrambled for the homeowner's set with a decoder. Subscribers pay either on a per channel basis, in which a monthly charge covers all programming distributed on the channel, or per program, in which services can be activated upon request and charges are assessed for a particular program. Pay-TV can be distributed over cable systems, over-the-air, or via microwave or master antenna systems.

Penetration: The percentage of households in an area where cable service is available which have subscribed to the service.

Petition for Special Relief: Mechanism by which waiver of FCC rules is sought by a cable system, franchising authority, station licensee, permittee, applicant, or other interested person.

Pole Agreement: An agreement between the CATV operator and the utility companies or other owners of poles upon which the operator has been granted the right of attaching its cable.

Predicted Grade A Contour: The line representing the service area in which a good picture is computed to be available 90 percent of the time at 70 percent of the receiver locations.

Predicted Grade B Contour: The concentric area marking a televi- sion station's service area in which a good picture is computed to be available 90 percent of the time at 50 percent of the receiver locations.

Primary Transmission: A transmission made to the public by the transmitting facility whose signals are being received and further transmitted by the secondary transmission service, regardless of where or when the performance or display was first transmitted.

Prime Time: Programming carried from 6 P.M. to 11 P.M., local time; except in the central time zone between 5 P.M. and 10 P.M., and in the mountain time zone where each station may decide whether the prime-time period shall be 6 P.M.-11 P.M. or 5 P.M.-10 P.M.

Request for Proposal (RFP): Document issued by local franchising authority that provides requirements for potential applicants in cable franchising process.

Registration Statement: A filing with the FCC which provides authority to carry television signals if such carriage is consistent with FCC rules. Replaces Certificate of Compliance.

Resale Common Carrier: The distributors that retransmit broadcast signals via satellite by leasing satellite transponders and then reselling their services to broadcasters and cable operators.

Retransmission Consent: Former FCC rule that required cable systems to obtain consent from broadcast stations prior to retransmitting their signal to cable subscribers.

Satellite: A sophisticated electronic communications relay station orbiting 22,300 miles above the equator moving in a fixed orbit at the same speed and direction as the rotation of the earth (about 7,000 mph east to west). Satellites require only one repeater between transmission and reception points; terrestrial systems repeat every 20 or 30 miles with microwave links. Satellite program suppliers use earth transmit and receive stations for linking the signal to the satellite and back to the cable system.

Satellite Master Antenna Television (SMATV): A private cable system located on private property and serving private dwellings. Satellite programming is obtained via an earth station, amplification and a distribution system. See also MATV.

Satellite Transponder: See Transponder.

Saturated System: A twelve channel cable television system, for example, carrying or required to carry more than twelve television signals under the must carry rules.

Saturation Rate: The number of subscribers per number of houses passed by a cable television system, expressed as a percentage.

Scrambler: A device used to electronically alter a signal so that it can only be viewed on a receiver equipped with a special decoder.

Secondary Transmission: The further transmitting of a primary transmission.

Series: Two or more works centered on and dominated by the same individual or having the same cast of characters or a continuous theme or plot.

Signal: The coherent, significant and intention components of information (such as sound or picture) received, or transmitted, as electrical impulses. Signals are noted in terms of strength (voltage) and frequency (cycles per second).

Signal Carriage: Those channels carried by a cable system. Depends on whether or not the community served by the cable system is within a 35-mile radius called the "specified zone" of a commercial television station licensed to a major or smaller market.

Significantly Viewed: Viewing in other than cable television households of a station which constitutes a share of at least 3 percent of the total weekly hours, with a net weekly circulation of 25 percent; for an "independent," at least a 2 percent share, with a net weekly circulation of at least 5 percent.

Siphoning: Charge of broadcasters that audience support of cable and pay-TV systems will allow them to outbid broadcasters for prime entertainment and sporting events, and therefore to deprive "free-TV" audiences of this premium programming.

Smaller Television Market: The specified zone of a commercial television station licensed to a community that is not listed as one of the major (top 100) television markets. Also known as minor markets.

Specialty Stations: A commercial television broadcast station that generally carries foreign-language, religious, and/or automated pro- gramming in one-third of the hours of an average broadcast week and one-third of weekly prime time hours.

Specified Zone of a Television Broadcast Station: The area extending 35 air miles from a specific reference point in the community to which that station is licensed or authorized by the Commission. See Thirty Five (35) Mile Zone.

Split Cable: Special electronics gear which makes it possible to block out any incoming commercial and simultaneously substitutes a test commercial.

Splitter: A passive device (one with no active electronic components) which distributes a television signal carried on a cable in two or more paths and sends it to a number of receivers simultaneously.

Sports Blackout: Federal law requires cable systems to delete imported coverage of local sports events to protect gate receipts.

Standard Television Signal: A signal which conforms to the television transmission standards of the FCC.

Subscriber: A member of the general public who receives broadcast programming distributed by a cable television system and does not further distribute it.

Subscriber Drop: A cable which connects the tape or coupler of the feeder cable to the subscribers' premises and TV set.

Subscription Television (STV): Programming or special services supported by viewers, as contrasted with advertiser financed methods. A scrambled broadcast signal is sent over the air to be decoded through a special device at the subscriber's terminal. See also Pay Cable.

Superstations: Local broadcast stations such as WTBS, Atlanta that have achieved national distribution through use of satellite retransmissions.

Switched System: A cable system designed with the capability to send messages (such as voice, video or data information) to or from any individual point, or designated address, on the system. A switched system may be circuited switched where a direct transmission path is established between sender and receiver or message switched where messages are relayed to the receiver by switching centers in a store and forward manner.

Switched Service: A cable communications service in which each subscriber has a terminal and may communicate with any other subscriber.

Syndicated Programming: Any programming sold, licensed, or distributed to television stations in more than one market within the United States for noninterconnected television broadcasts. Live presentations are not included.

Syndicated Exclusivity: FCC rule that formerly provided for exclusive rights to be given to local stations in programs or series they had purchased in syndication.

Tap: A device installed in the feeder cable which connects the home TV set to the cable network. Also called a drop.

Tariff: In the regulated communications business, a price list that has been approved by the FCC or a public utility commission as conforming to its rate-making guidelines.

Telecommunications: The process of transmitting, receiving or exchanging information (data, voice, or graphics) between multiple locations. The minimum elements required for the telecommunications process are a message source (a person, computer, teleprinter, or similar communications equipment), a transmission medium (radio frequencies, fiber optics, electrical wire, submarine cable, or a satellite), and a receiver (normally similar to the message source).

Teletext: A one-way information retrieval service carried on the vertical blanking interval of a television signal. This specific type of videotex has a limited data capacity.

Television Households: A household having one or more television sets.

Television Market: A city or complex of closely associated cities served by commercial television broadcast signals from one or more TV stations located within the area. The FCC has used television markets for designating what kind of cable services an operator should provide.

Television Station; Television Broadcast Station: Any television broadcast station operating on a channel regularly assigned to its community.

Television Translator Relay Station: A microwave auxiliary sta- tion intended to transport the television broadcast station's signal to the translator site.

Television Translator Station: A low-power broadcast station, licensed by the FCC, which receives a television signal off the air and retransmits it without altering any characteristics of the signal except its frequency of amplitude. (The term "translator" now encompasses all spectrum-relay devices authorized by the Commission, including VHF relays which previously would have been called "boosters.")

Terminal: The equipment at the subscriber end of the cable linkage. This term includes everything from a simple plate to which wires from the antenna outlet on the receiver are attached to sophisticated devices which might include keyboards, videotape recorders, and minicomputers.

Thirty-Five (35) Mile Zone: The area within each market to which FCC regulations are applicable. The area is defined as a zone of 35 miles radius surrounding a specified reference point (often the main post office) in each designated community in the market. The purpose is to carve out the market's central city, suburbs, and nearby communities on which stations generally rely for their principal audience support. All cable systems must carry the signals of all stations licensed within 35 miles of the cable system's community.

Tiers: Multiple levels of service to cable subscribers.

Transponder: Electronic relays for video and audio signals on communications satellites. Signals are sent from an uplink and retransmitted on a downlink.

Trunk: The main line of a cable system, usually including amplifiers as well as the coaxial linkages.

TVRO: TV receive-only earth station.

Two-Way Capacity: A CATV system with two-way capacity can conduct signals to the headend as well as away from it. Two-way or bi-directional systems now carry data; they may eventually carry full audio and video television signals in either direction.

Ultra High Frequency (UHF): A band of frequencies extending from 300 MHz to 3,000 MHz. Television stations assigned to channels 14-70 (previously through 83) are known as UHF stations and operate on frequencies ranging from approximately 470 MHz to 800 MHz.

Uplink: A signal from an earth transmit station to a sky satellite.

Upstream: A message flow from the subscriber terminal to the "head-end" of a service.

Utility Services: Cable functions not directly related to audience viewing, such as meter reading or security devices.

Vertical Blanking Interval (VBI): Portion of the scan lines on the television signal that are not used to transmit video programs and may be used to carry teletext information.

VHF (Very High Frequency): A band of frequencies extending from 30 MHz to 300 MHz. Television stations assigned channels 2-13 are known as VHF stations. (Channels 2-6, from 54 MHz to 88 MHz; channels 7-13, from 174 MHz to 216 MHz.)

Videotex: A generic term for all information retrieval and transaction services delivered via coaxial cable, telephone lines, broadcast signals or any combination of the three.

Video Transmission: The original video signal before it is modulated and converted to radio-frequency and broadcast or cablecast. A home television set reconverts radio-frequencies to a video signal.

Viewdata: A two-way retrieval and transaction service delivered via coaxial cable, telephone lines, broadcast signal or any combination of the three.

Wild Cards: Broadcast signals of independent television stations which cable systems were permitted to add to

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Regional Cable Headend

The regional cable headend serves as the local data network operations center. A carrier-class IP switch or router interfaces with a backbone data network, such as those operated by @Home or Road Runner, offering connectivity to remote content servers, as well as the global Internet.

This switch/router also connects to cable modem termination systems (CMTS) housed in the distribution hubs (hyperlink). Many cable operators are beginning to deploy high-capacity packet transport solutions over fiber rings connecting the CMTS units in their distribution hubs, such as Packet Over SONET (POS), at up to OC-12 speeds (622 Mbps).

Content and application servers are typically at the regional cable headend, as are network management and operations support systems. If the cable operator were offering IP telephony, voice calls would be directed by the headend router to a IP telephony gateway, and then onto the public switched telephone network (PSTN).

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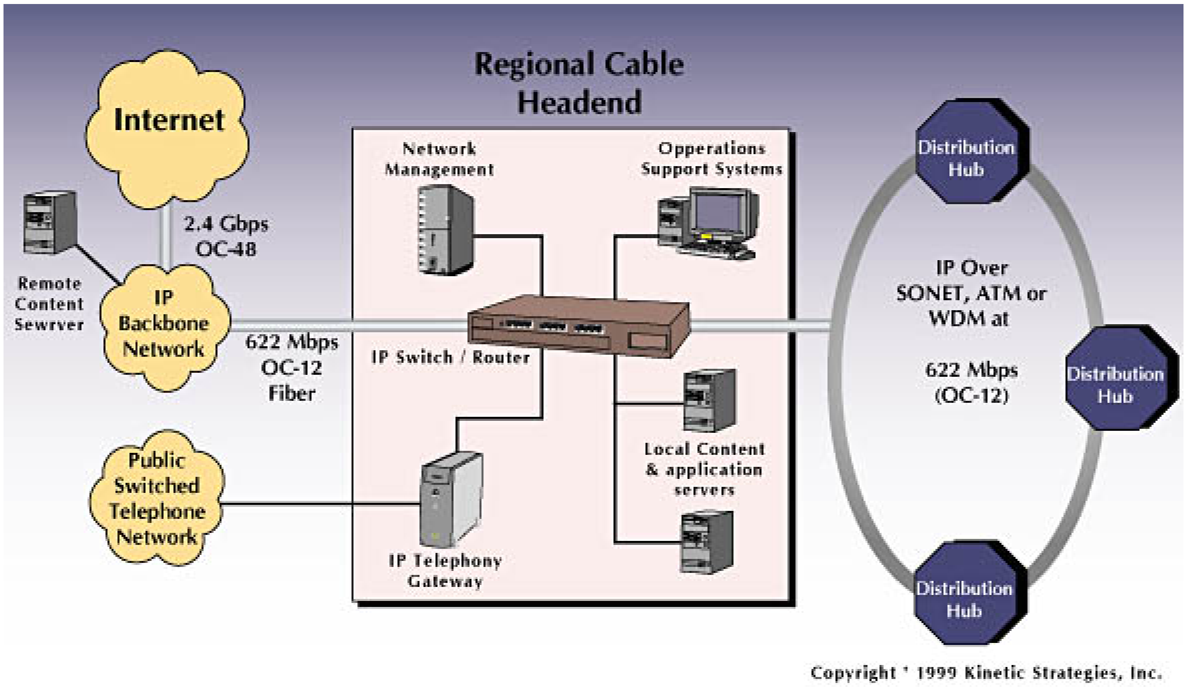
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Cable Data Network Architecture

To offer high-speed Internet services, a cable operator creates a data network that operates over its hybrid fiber/coax (HFC) plant. The following diagram provides a high-level look at a typical large market cable network, including a regional cable headend (typically serving 200,000 to 400,000 homes), which feeds distribution hubs (each serving 20,000 to 40,000 homes) through a metropolitan fiber ring. At the distribution hub, signals are modulated onto analog carriers and then transported over fiber-optic lines to nodes serving 500 to 1,000 homes. From the node, these signals are carried via coaxial cable to a home or business.

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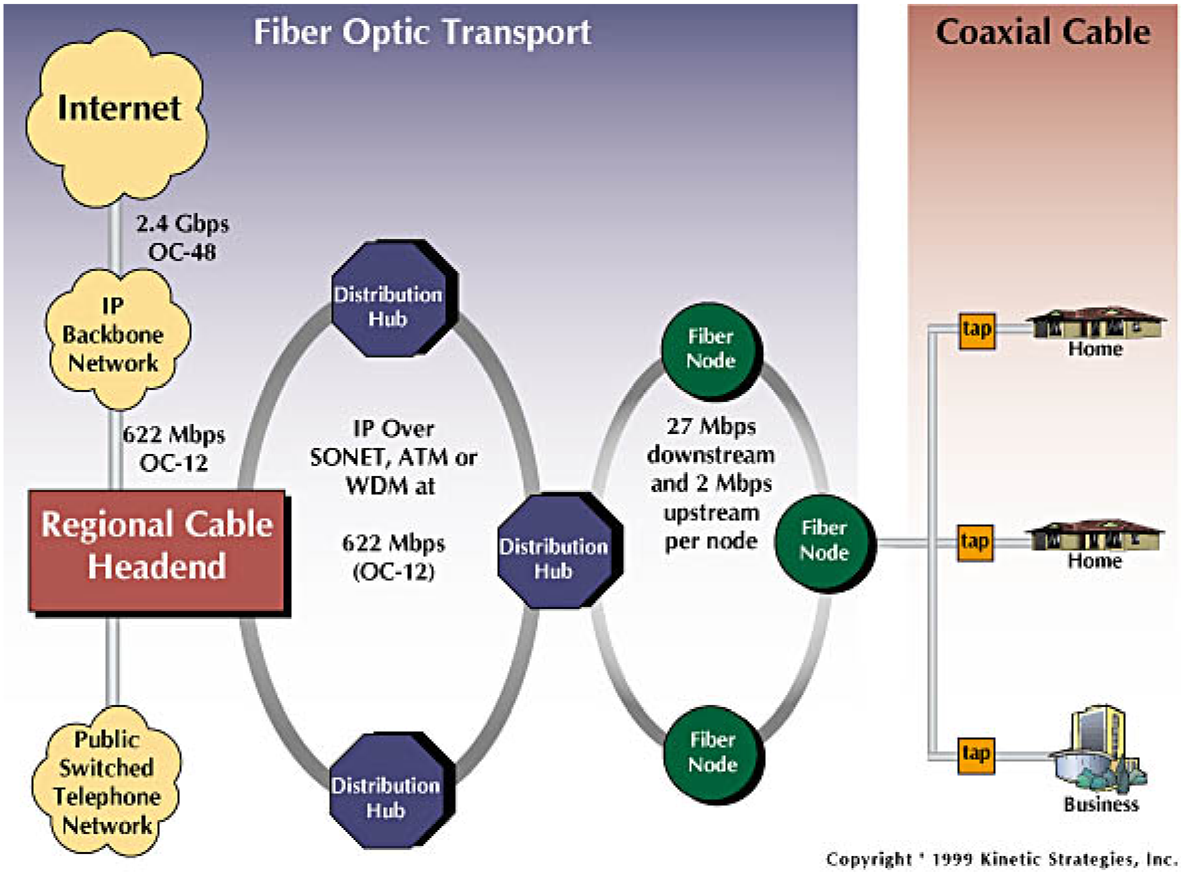
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cable head-end

Last modified: Monday, January 14, 2002

A cable television company's local facility that originates and communicates cable modem and cable TV services to its subscribers. The cable company's head-end includes the CMTS, which is essential in providing high-speed Internet access to cable subscribers.

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